

CAPE COD NOTES.

BY. REV. HENRY W. WINKLEY.

The month of July was spent at Provincetown. August at the head of Buzzard's Bay. Unfortunately without a dredge, I can report only low tide results. The hook on the end of Cape Cod is, geologically speaking, a late formation, composed entirely of coarse sand with limited vegetation; hence not a paradise for land and fresh-water forms. I examined two fresh-water ponds but found no shells. On the land *Helix hortensis* has a colony. No banded forms were found. The lemon-yellow and a very light nearly transparent form are the chief colorings. The latter compared with the specimens of this species found by Mr. C. W. Johnson, at Chatham, are of the same color but more nearly transparent. While the Cape is not an absolute barrier between northern and southern forms, it is usually counted as a boundary. Provincetown being at the tip end, I was curious to know its fauna, and can pronounce it southern. *Bittium nigrum* and *Odostomia trifida*, *bisuturalis*, *fusca*, *seminuda*, and an undescribed species occur more or less abundantly. Both *Lunatia heros* and *Neverita duplicata* occur on the sand flats. *Litorinella minuta* is abundant but small. *Mya arenaria*, living in the clean sand, is abundant and the whitest shells I ever saw. *Venus mercenaria*, *Clidiophora gouldiana* and other forms show the general character of the fauna. Without attempting to make a detailed list, the forms are the same one would find south of the Cape. *Purpura lapillus*, living on the wharves, gave a few curiosities. Several specimens of deep yellow color in last year's growth had changed in this year's addition to pure white.

The outer side of Cape Cod is the home of *Ceronia arctata*. A visit to Highland Light at North Truro gave me a half hour at high tide, but I found a good set of the species and of fine large size. Odd valves of *Astarte castanea* show that it abounds. One or two specimens of *Cochlodesma leanum* demonstrate its home there.

A day spent at Woods Holl gave me an hour's collecting at low tide in the eel pond. The only record I would make would be one or two species of *Turbonilla* secured from a row boat. It is the first time I have ever collected any species of this genus in shallow water. My headquarters during August were at Wareham on an arm of

Buzzard's Bay, not quite on the Cape but near enough. As Pat says, "contagious" to it. The marine forms here are affected by brackish water. In one arm I could get *Ilyanassa obsoleta* in abundance, but failed to find *Bittium* and the *Odostomias*. In another arm with the fresh water they occur, but more or less eroded. A colony of fine specimens of *Paludestrina salsa* occurs in a pot hole on the marsh, and my daughter, Miss Ruth Winkley, located the same form sparingly among the flags along the border of the Agawam river at East Wareham. More should be said of the fresh-water collecting. The Agawam river is rich in specimens. *Unio complanatus* abundant and large, *Anodonta cataracta* occasional, and *Anodonta implicata* abundant and the finest specimens I have seen. My largest is $6\frac{1}{2}$ inches long and weighs $5\frac{1}{2}$ ounces. (Gould gives the largest as $4\frac{1}{2}$ inches long.) *Sphaerium secure* is very abundant. I obtained an unusually fine series of *Anodonta* beaks at this spot. On the whole I may say that a section of this stream is the richest in animal life I have ever seen in New England.

Ditches in the older cranberry bogs and small brooks abound in specimens of *Pisidium*, and *Ammicola limosa* and *porata* occur sparingly. Other fresh-water species occur like *Planorbis*, *Physa*, etc., but they are in better form earlier in the season, so I neglected them. I failed to find land shells. It has been an exceedingly dry season, and that may be the reason. I regret that I had no dredge with me. The good results from shore collecting would indicate the same from deeper waters.

A NEW SPECIES OF FLUMINICOLA.

BY H. A. PILSBRY.

The genus *Fluminicola* of Stimpson comprises globose, *Somatogyrus*-like snails of streams and springs in and west of the Rocky Mountains. A list published by the writer in 1899¹ enumerates seven species and one subspecies. A new form was among the mollusks collected by the late Rev. Mr. Ashmun in Idaho, during the last year of his life.

¹ The NAUTILUS, XII, March, 1899, pp. 123, 124.